WHAT IS CLAIMED IS:

1. A method for manufacturing a bonded wafer, comprising the steps of:

ion-implanting of a light element into a wafer for active layer at a predetermined depth via an insulating film that has been formed thereon to form an ion-implanted area in said active layer wafer;

subsequently bonding said active layer wafer with a supporting wafer having an insulating film formed thereon together as their insulating films facing to each other to produce the bonded wafer; and

heat treating said bonded wafer to form bubbles of said light element in said ion-implanted area and thereby induce a cleavage and separation of a part of said bonded wafer defined in said ion-implanted side for forming an active layer.

2. A method for manufacturing a bonded wafer in accordance with claim 1, in which

a thickness of said insulating film of said active layer wafer, tdox, satisfies the following formula:

$$tdox < (1/9) \times tsoi,$$

where tsoi = thickness of said active layer.

3. A method for manufacturing a bonded wafer in accordance with claim 1 or 2, in which

said active layer wafer and said supporting wafer are subjected to a plasma treatment, respectively, before said bonding step of said active layer wafer with said supporting wafer.

4. A method for manufacturing a bonded wafer in accordance with claim 3, in which said plasma treatment is carried out in an atmosphere of oxygen gas or nitrogen gas by holding said wafers at a temperature

of 400℃ or lower for ten seconds or longer.